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ABSTRACT

Previous attempts to change the prevailing negative attitudes of health professionals toward cancer and cancer patients have consisted mainly of elective courses for small groups of students at advanced levels of medical training. In order to develop more positive attitudes, the Cancer Coordinating Committee at the Medical College of Pennsylvania developed and implemented a required introductory course in oncology for freshman students. The course touched on various aspects of cancer, including epidemiology, prevention, detection, diagnosis, staging, treatment, and rehabilitation. Each session of the course included interviews with cancer patients. Evaluation of the attitudes before and after the course, made with Haley's Cancer Attitude Survey and a Semantic Differential test indicated that on several measures, attitudes toward cancer and cancer patients were more positive after the course than before, and that changes observed were largely maintained over five months. Several attitude changes were not found, in responses related to cancer prevention and detection and the value of early diagnosis. Further changes in the teaching of oncology are suggested: the case for prevention needs to be made more strongly, course objectives need to be clarified, additional materials need to be provided to the students, and the testing procedures should be reevaluated. The required introductory course is recommended not as a substitute for later elective courses, but as an additional part of the curriculum. (MSE)

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IMPACT OF AN ONCOLOGY COURSE

ON THE ATTITUDES OF FRESHMAN MEDICAL STUDENTS

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ABSTRACT

Previous attempts to change the prevailing negative attitudes of health professionals toward cancer and cancer patients have consisted mainly of elective courses for small groups of students at advanced levels of medical training. This paper reports on a brief required Oncology course for an entire class of freshman medical students (n=100). The course touched on various aspects of cancer including epidemiology, prevention, detection, diagnosis, staging, treatment, and rehabilitation. Each session of the course included interviews with cancer patients. Evaluation of attitudes before and after the course through Haley's Cancer Attitude Survey and a Semantic Differential indicated that, on several measures, attitudes towards cancer and cancer patients were more positive after the course than before, and that the changes observed were largely maintained over five months. The paper also discussed the implications of the findings for additional curriculum revision to meet the objectives of the course more fully.

INTRODUCTION

The high incidence of cancer (1), reflected in the large number of patients with this disease seen in medical practice, makes it likely that most future physicians will be involved in the management of cancer patients, if only to refer them to a colleague (2,3). There is general agreement that every patient should receive adequate attention and support in the course of any illness, but there is concern that this does not occur for patients with terminal illness, particularly when that illness is cancer. A number of studies document the existence of widespread discomfort and negative attitudes in physicians towards patients with cancer or terminal illness (4,5). After an extensive review of the literature, Kaye (6) concluded that the longstanding stigma associated with cancer still prevails not only in the general public, but in the professional community as well. This stigma creates fear and anxiety in medical practitioners and medical students alike.

The problem is exacerbated by the fact that cancer patients tends to share this fear and anxiety. These feelings are often reinforced by the nature of the treatment and support (or lack of support) they receive from those providing care. Preconceived notions about cancer and cancer patients held by phycisians and medical students, while generally remaining below the surface, color the nature of their interactions with patients. Cassileth and Egan report that prior to a course in Oncology medical students acknowledge feelings of "death, gloom and despair" about patients with cancer despite the knowledge that "many cancer patients are cured or have their lives prolonged by medical intervention." They admitted to difficulty in "talking to cancer patients about their medical problems" and to a prevailing attitude of fear and pessimism (7).

The reasons for such attitudes, while fairly obvious on the surface, are deeprooted and complex. According to Becker (8) they are embedded in the socialization

of medical students. Merton (9), and Cooper (10) point out that, contrary to what one would wish, doctors do prefer one type of patient to another. They tend to prefer patients with health problems that they can cure. These authors contend that it is this "curing syndrome," deeply embedded in the medical culture and permeating the socialization of the medical student and the physician, that stands as a barrier to attitudinal and behavioral changes toward the chronically ill in general, and toward cancer patients in particular. The need to cure hinders the physician from providing cancer patients and their families with the guidance and support they need in order to cope with both their illness and its treatment. Novak suggests that when students or practitioners perceive few rewards or when they cannot anticipate a successful outcome, they are unlikely to pay attention to a patient's psychosocial needs (11). Students generally receive little training in the area of psychosocial needs and are exposed to few good role models. They go into practice unprepared to handle the total needs of cancer patients and thus perpetuate problems rather than help to solve them. In the words of Cooper (10):

> The overall stigma attached to cancer in our society is not a matter that can be corrected by the medical school faculty or students alone...However the medical culture could lead the way to correcting biased stereotypes and misconceptions instead of perpetuating negative attitudes and behaviors toward cancer patients and their treatment.

These negative attitudes and feelings have serious consequences for medical practice. Payne and Krant (12) report that a physician who is uncomfortable in talking with a cancer patient may fail to obtain the necessary information. This may lead to an incomplete history, inadequate information about the patient, and inappropriate decisions about the management of that person's illness. While medical educators and practitioners have known about these attitudes, few efforts have been made to alter them, either during undergraduate training or in continuing medical education. Cooper et al report that there is currently no emphasis on cancer and on the management of cancer patients nor do they anticipate that such an emphasis will emerge in the near future (10).

The experience of others (2,7,11,12) however, suggests that changes in the attitude of medical students can be brought about through educational programs which address either the affective domain alone or a combination of affective and cognitive domains. The research done to date is limited, but significant gains have been reported. There are indications that appropriate training can lead to changes in attitude. These changes are in the direction of a more realistic understanding of the disease and a more realistic perception of cancer patients, as well as a more compassionate acceptance by the physicians of their role in the care and management of cancer patients. One such effort to change students' attitudes is reported below.

DESCRIPTION OF THE COURSE

Several years ago the Cancer Coordinating Committee at The Medical College of Pennsylvania (MCP) sought approval from the Curriculum Committee to develop and implement a required introductory course in Oncology for students in the early stages of their medical training. The major emphasis of the proposed course would be to develop more positive attitudes towards cancer and cancer patients. In response the Curriculum Committee allotted eight hours of curriculum time in the freshman year to a required course in Oncology. An interdepartmental committee was appointed and charged with the responsibility for designing the course and evaluating its impact.

Considerations and Constraints

In designing the course several constraints had to be taken into consideration. The total of eight hours of curriculum time was a major constraint. Also, the fact that the course was given in the freshman year limited what could be taught and how it could be presented. Because of the way the courses were sequenced Oncology was to be introduced before the students had any experience with anatomy, much less contact with patients or with clinical teaching. Although these factors seemed disadvantageous it was felt that the placement of the course in the freshman year could also be helpful

in that it provided an opportunity to develop positive attitudes early in training. The impact of early intervention strategies is well-known from child development. If the developmental model applies to medical education as well, then one can hypothesize that attitudes and value systems formed early in training would be reinforced and augmented through subsequent experiences and exposure to role models. Becker tends to support this hypothesis in his study of the socialization of medical students (8). Thus, providing positive role models early in medical school was viewed by the committee as an exciting opportunity.

The desires and expectations of the students also had to be considered in the design of the course. By this we refer to a widespread desire among students for factual and clinically oriented content. The evaluation forms filled out by the students at the completion of every course indicate a desire for cognitive challenge and an expectation that any course in medical school will provide opportunity for appreciable learning of facts. Certain courses which are not information-oriented have not been ranked highly by the students. In addition, a desire for clinically oriented material during the basic science years is apparent.

Another consideration in developing the course was class size. This was to be a required course for 100 first year students. The attempts reported by others to develop positive attitudes towards cancer have been confined to small groups at later stages of training. Cassileth and Egan, for instance, describe the conduct and evaluation of an elective course designed for second through fourth year students which led to changes in attitudes and improved interactional skills (7). Others have focused efforts on persons even further along in their training. Payne and Krant have worked with fourth year students (12), Wise (2) and Artiss and Levine (13) with Oncology Fellows. It was hypothesized that more positive attitudes could be engendered in the setting of a large group as well but no models for large group instruction were found in the

literature. Thus a model for the course had to be developed.

A final consideration in designing the course was the factor of accountability. Program evaluation is a necessary component of any course and one of the major factors leading to the present research.

Components of Course Design

With all of these constraints in mind, the committee focused on four components in designing the course: objectives, content, instructional strategies and evaluation.

Objectives:

(1) students will have a more positive attitude toward cancer and cancer patients upon completion of the Oncology course than they had before it.

(2) students will become aware of the possibilities for prevention of cancer.

(3) students will recognize the importance of total patient care and multidisciplinary intervention in the detection, diagnosis, pre-treatment evaluation, treatment and the management of the patient with cancer.

Content:

The course objectives determined the content of the course and, to some extent, the instructional strategies to be used. Content was designed to follow a sequence from prevention and screening to rehabilitation. Topics covered included: some historical background on the disease; some definition of terms; the role of environmental and host factors in cancer, with implications for prevention; some alarming as well as some very positive cancer statistics; facts and myths about the causes of cancer; prevention; a description of early warning signs, staging, facts about survival; screening, detection and diagnostic techniques; treatment strategies, rehabilitation and follow up; and finally, the scope and the activities of the major federal agencies

charged with identifying and regulating cancer causing substances and processes. The content was organized into four sections as follows: 1) prevention, epidemiology and screening programs; 2) detection, diagnosis and pre-treatment evaluation; 3) treatment options; and 4) rehabilitation and long-term follow-up.

Instructional Strategies:

Several modes of instruction were employed. Much of the terminology, facts, figures, myths and historical background was covered through a written handout; there was no assigned text for the course. Each of the four two-hour sessions followed the same general format. A didactic portion (lecture) was followed by interviews with cancer patients. The lecture was presented by several physicians to emphasize the roles and responsibilities of different specialties within a unified multi-disciplinary framework for patient care. Slides, x-rays, overheads and films were used liberally.

The second half of each session was devoted to interviews with two or three cancer patients. Patients were chosen to illustrate different forms of cancer as well as the impact of cancer on people of different ages and circumstances. The forms of cancer included Hodgkin's Disease, Wilm's tumor, colon cancer, cervical cancer, and lung cancer. The interviews were initially structured by the patient's own physician. The physician usually described the patient's cancer using appropriate audio-visual materials. The discussion of detection, staging and treatment and rehabilitation for that particular patient brought out the roles and responsibilities of the various members of the team (e.g. surgeon, radiologist, medical oncologist, social worker). In addition to discussing the medical aspects of the disease the physician discussed with the patient his/her feelings and family dynamics. The medical students were then invited to participate in asking questions of the patient. The students were very

active in eliciting information. The questions they asked were phrased in a manner that reflected the respectful, caring and sympathetic approach of the patient's physician. Patients responded freely and openly to such questions as "What made you go to the doctor?" "How has the disease affected your sex life?" or "What has been the financial burden of your illness?" The interview process served several functions: students learned something about different forms of cancer, they saw in practice the behavior of physicians with cancer patients, they saw patients coping with their disease, they became aware of the number of physicans and other health professionals involved with each particular case and how they worked together. Finally, through the students' involvement and participation in the interview, they came to see each patient as an individual,not a disease category.

Evaluation:

Three forms of evaluation were employed. A. A multiple choice test to measure gains in information was administered just before the course and upon its completion. B. Two measures of attitude, the Cancer Attitude Survey (CAS) developed by Haley (14,15) and a Semantic Differential modelled by Appel and Mausner after that described by Osgood, Suci and Tannenbaum (16) were administered three times. These instruments were given immediately before the course (Pretest), immediately after its completion (Posttest), and five months after the completion of the course (Follow-up). C. At the end of the course students also completed a course evaluation form (Appel). This form solicited ratings and comments on three aspects of the course: content, instruction, and evaluation.

Cancer Attitude Survey (CAS). This test consists of 33 statements about cancer found by Haley et al (14,15) to measure reliably four attitudinal dimensions isolated by factor analysis. These dimensions or factors are: CAS I: Attitudes toward the patient's psychological resources for coping with a serious illness such as cancer

(12 statements): CAS IIa: Attitudes toward the value of early diagnosis of cancer (6 statements): CAS IIb: Attitudes toward the value of aggressive treatment of cancer (7 statements): and CAS III: Attitudes toward personal immortality and acceptance of death (8 statements). Each subject was scored on each of the four factors, the score representing the sum of all the ratings on that factor. The higher the score, the more positive the attitude toward the factor.

Semantic Differential Test. The Semantic Differential uses pairs of bipolar adjectives to measure the psychological meaning of concepts. Subjects apply a rating scale (1 to 7) to a number of adjective pairs for each concept. In the original development of the Semantic Differential three primary dimensions were identified: Evaluation, Potency and Activity. The current study used 15 adjective pairs for rating concepts; seven for Evaluation (e.g., good-bad, happy-sad), four for Potency (e.g., strong-weak, heavy-light), and four for Activity (e.g., sharp-dull, fast-slow). The test is scored in such a way that a low score indicates high evaluation, activity and potency. Conversely, higher scores indicate low evaluation, inactivity and weakness. Six concepts were selected for determining attitudes toward cancer: e.g., CANCER, CANCER SPECIALIST, etc. (See Table 2 for complete listing of concepts). To determine the specificity of attitudes toward cancer, an additional disease, heart disease, was selected and six concepts obtained in parallel about this disease as well. Thus subjects rated a total of 12 concepts, e.g., CANCER, HEART DISEASE, PATIENT WITH CANCER, PATIENT WITH HEART DISEASE, etc.

Since interest centered mainly on the possible effects of the course over time, differences between pre-test and five month follow-up values for the attitude measures were evaluated by means of paired-t tests.

RESULTS OF THE EVALUATION

All students (N=100) took both the pre and post tests which measured level of information. The average score on the pre-test was 72 and on the post-test was 95, suggesting a large measure of information gain.

The attitude surveys showed significant changes in attitude upon completion of the course, many of which were maintained over five months. The results are shown in Table 1 (CAS) and Table 2 (Semantic Differential). The pretest was taken by 99 students, the posttest by 98 students, and the follow-up by 85 students. Responses from the 82 students who took all three tests form the basis for Tables 1 and 2.

INSERT TABLE 1

Table 1 reveals considerable stability across the three administrations of the test for CAS IIa (attitudes toward the value of early diagnosis), and for CAS III (attitudes toward personal immortality and acceptance of death). However, on CAS I (attitudes toward the patient's ability to cope), there was a significant increase in positive attitude immediately after the course, and this increase was largely maintained at five months. On CAS IIb (attitudes toward the value of aggressive treatment), the highly significant level of increase in positive attitude after the course was maintained at five months.

INSERT TABLE 2

Table 1 shows striking parallelism in the perception of cancer and heart disease in the pretest. For both diseases the ranking of concepts on all three dimensions is almost identical. For example, in evaluation, the disease (i.e. CANCER, HEART DISEASE) is rated most negatively (39.5 and 35.8 respectively). The PATIENT WITH DISEASE has the next most negative rating, followed by TREATMENT and DETECTION. The least negative ratings are given to SPECIALIST and PREVENTION. For each concept, cancer is given a more negative rating than heart disease, but the differences between the two along the evaluative dimension are slight. The pretest ratings of concepts

along the dimensions of potency and activity are almost identical for both diseases.

Table 2 indicates stability across the three administrations of the test for several of the concepts related to cancer, change for others. PATIENT WITH CANCER, showed significant change in all three dimensions. TREATMENT OF CANCER showed increase in potency and evaluation, but not activity. The concept CANCER increased in the evaluation dimension, CANCER SPECIALIST increased in evaluation immediately after the course, but the increase was not maintained.

Positive changes in attitude were not restricted to cancer. On the evaluative dimension there were changes in two concepts related to heart disease that paralleled those seen for cancer (i.e. CANCER/HEART DISEASE and PATIENT WITH CANCER/PATIENT HEART DISEASE). However more concepts showed significant change in the desired direction for cancer than for heart disease and these occurred in potency and activity as well as evaluation. Thus there is more evidence of attitude change for cancer than for heart disease.

In addition, there were some changes related to both diseases that went counter to the hypothesized direction. The concept SPECIALIST showed a decrease in perceived potency and activity, PREVENTION showed a decrease in potency.

It is of interest to examine the relative position of PREVENTION with respect to the other concepts for the three dimensions. Although PREVENTION is rated most highly of all six concepts along the dimension of evaluation, it is not rated as most active or as most potent. For both diseases PREVENTION is perceived as less potent than DISEASE SPECIALIST and less active than most of the other concepts.

INSERT TABLE 3

The student feedback form offered some interesting comments and ratings. Table 3 shows these ratings for the areas of course content, instruction and evaluation. A total of 97 students responded to the form.

While the course content was rated very positively (i.e. rating of 1 or 2) by a majority of the population and over 25% who commented agreed with this, over 30% of the students expressed concern about the breadth and depth of the course content. Comments seemed to indicate a confusion about the purposes of the course and a difference between what the course conveyed and student perceptions and expectations about the course.

In terms of instruction, there was no question about the positive perceptions by the students of the instructor and of the patients. In fact, the patients were viewed as the highlight of the course. A fair number of students requested additional readings or a bibliography.

The area which evoked the most negative comments from the students was evaluation. The major complaints voiced by the students concerned the attitude surveys, which by some were viewed as an invasion of privacy and by others as invalid instruments. Some comments also indicate a confusion as to the purposes of the instruments and the potential use or abuse of the data.

In addition to rating the various aspects of the course, over two-thirds of the students provided comments. Well over half the students confirmed that the course had shifted their attitudes in a more positive direction. For example: "This course has changed or influenced my views on cancer. Previous exposures have been grim...this course has shown me that the future is appearing brighter." Others said that "instructors exemplified a positive hopeful attitude in the management and treatment of cancer," and "the use of patients truly (made) my attitude regarding cancer much more positive."

DISCUSSION

This paper reports on a study to evaluate the impact of an oncology course on freshman medical students. The major purpose of the course was to change attitudes about cancer and cancer patients.

The limitations of the study must be acknowledged. This was not a controlled study. Further, although our data are limited to verbally expressed attitudes, our ultimate concern is with future behavior. The relations between behavior and responses on a paper and pencil test of attitudes are known to be complex (17). Even with these limitations our data suggest that the course succeeded in teaching facts about cancer and in influencing attitudes of medical students about cancer and cancer patients. The freshmen who took the course showed specific changes in two measures of attitude- the CAS and Semantic Differential. The changes in these tests are consonant with each other and also with the content of the course. The increased value placed on ability to cope (CAS I) after the course is in agreement with the increase in evaluation, potency and activity of the PATIENT WITH CANCER on the Semantic Differential. Similarly, the increase in perceived effectiveness of treatment (CAS IIb) is consistent with the significant increase in potency for TREATMENT OF CANCER. Also, the course evaluations completed by the students confirmed that the objective of engendering more desirable attitudes towards cancer and cancer patients was achieved.

The attribution to the course of changes in attitudes towards cancer would be more clearly justifiable if there had been no increased evaluation for HEART DISEASE and PATIENT WITH HEART DISEASE. However, changes in perception of heart disease were limited to the dimension of evaluation whereas changes in perception of cancer occurred in all three dimensions. A possible explanation of the changed perception of heart disease is that it may reflect the impact of a course in CPR that ran simultaneously with the oncology course. Alternatively it may represent generalization to any chronic disease from the exposure to cancer patients in our course.

Several desired evidences of attitudinal changes did not emerge. These include responses related to PREVENTION OF CANCER and DETECTION OF CANCER on the Semantic Differential, and attitude about the value of early diagnosis on the CAS. Similarly, the immediate increase in evaluation of CANCER SPECIALIST on the Semantic Differential

was not maintained. It is intriguing to speculate that the strong emphasis on a team approach to care of cancer patients in the course may have contributed to this finding.

The findings on the perception of prevention of disease by medical students are also worth noting. As mentioned above, the concept of PREVENTION (i.e., PREVENTION OF CANCER , PREVENTION OF HEART DISEASE) received the most favorable rating on evaluation, but was not judged the most active and potent of the concepts presented. This probably reflects accurately the students' appraisals of the possibility of prevention of chronic disease - i.e., that it is a fine idea but not immediately feasible or effective.

Our findings, including the feedback from students, suggest the need for further changes in the teaching about cancer. Clearly, the Semantic Differential indicated a greater shift in attitude toward treatment of cancer than toward its prevention. Particularly in view of the evidence that much of cancer is susceptible to prevention (18), the case for prevention needs to be made more strongly. The students' comments indicate that the objectives of the course need to be clarified; perhaps these expectations should be considered more fully in course planning. The expressed desire for additional information might be met through handouts, a bibliography, or reprints of recent articles. The negative comments about the instruments used to measure attitudes suggest that the need for testing should be better supported.

Several questions remain for further research. For one, are the changes in attitude identified in this study maintained beyond five months? For another, what is the ultimate contribution of courses such as the one described to the attitudes and behavior of practicing physicians? Does the course contribute at all beyond the experiences and exposures to compassionate, sensitive role models that should be part of the clinical training of all medical students? Research to answer such questions is underway.

In summary, we have reported a course in Oncology for freshman medical students that differs appreciably from the other educational experiences of the pre-clinical

years. This course gives the students an opportunity to gain some knowledge about cancer, to meet cancer patients who are coping well with their disease, and to observe clinical faculty who show a humanistic attitude and who are sensitive to the needs of patients with cancer. Participation in this course has been followed by changes in attitude towards cancer.

The approach followed -- i.e., a required program in the freshman year that provides direct exposure to patients with cancer -- is not proposed as a substitute for the elective courses for more advanced students reported by others, but as an additional way of tackling the problem. The idea of presenting to the entire class courses designed to affect attitudes seems to have real merit. As noted earlier, it is likely that all students will have to take care of patients with cancer at some time in their training, if not later in their years of practice. The students most in need of development of insight and interactional skills might well be the ones least likely to take an elective course addressed specifically to the social and psychological dimensions of care of cancer patients. Our results suggest that even a brief exposure to individual patients in a carefully designed required introductory course can reduce negative and fatalistic attitudes towards cancer and cancer patients.

TABLE 1

SCORES ON THREE ADMINISTRATIONS OF THE CANCER ATTITUDE SURVEY (CAS) FOR 82 FRESHMAN, MEDICAL COLLEGE OF PENNSYLVANIA, SPRING 1979.

CAS FACTOR	PRE	POST	FOLLOW-UP *
I Attitudes toward the patient's psychological resources for coping with a serious illness such as cancer (12 statements)	81.9	86.3	85.6 †
IIa Attitudes toward the value of early diagnosis of cancer (6 statements)	40.3	41.2	41.7
IIb Attitudes toward the value of aggressive treatment of cancer (17 statements)	32.5	38.0	36.3 §
III Attitudes toward personal immortality and acceptance of death (8 statements)	47.5	48.0	48.3

†$p < .01$ §$p < .001$

*statements about statistical significance refer to comparisons with pre-test values

TABLE 2

SCORES ON SEMANTIC DIFFERENTIAL TEST, PRE-TEST, POST TEST AND FOLLOW UP, FOR 82 FRESHMAN THE MEDICAL COLLEGE OF PENNSYLVANIA, SPRING, 1979.

CONCEPT	PRE		POST		FOLLOW-UP	
	Cancer	Heart Disease	Cancer	Heart Disease	Cancer	Heart Disease
Evaluation (Range 7 to 49)						
Disease (Cancer/Heart Disease)	39.5	35.8	33.5	32.5	34.8§	32.3§
Patient with Disease	31.2	30.6	27.3	26.6	28.2§	27.0§
Treatment	27.8	23.0	25.2	22.3	25.5§	22.6
Detection	26.1	23.9	24.7	24.1	25.3	24.9
Specialist	22.5	20.1	20.6	20.8	21.7	21.1
Prevention	20.3	18.5	19.4	19.1	20.1	19.4
Potency (Range 4 to 28)						
Disease	15.3	15.9	14.8	15.3	14.9	15.2
Patient with Disease	17.7	16.3	15.5	15.9	16.5§	15.9
Treatment	15.1	14.3	13.5	13.7	13.6§	14.4
Detection	15.1	14.7	14.4	14.4	14.8	14.5
Specialist	12.5	12.8	12.9	13.4	13.7(§)	13.5(*)
Prevention	13.9	13.4	14.4	13.8	14.8(*)	14.3(*)
Activity (Range 4 to 28)						
Disease	13.5	13.4	14.2	14.5	14.2	14.5 (†)
Patient with Disease	15.9	14.9	14.5	15.2	14.9†	15.4
Treatment	14.2	14.2	13.5	14.6	13.5	13.9
Detection	13.5	13.7	13.3	13.7	13.5	13.7
Specialist	12.4	12.1	13.2	13.5	13.6(§)	13.5 (§)
Prevention	14.4	14.0	14.6	14.5	14.6	14.2

*p<.05 †p<.01 §p<.001

TABLE 3

MEAN AND PERCENT DISTRIBUTION OF RATINGS OF 97 STUDENTS ON ONCOLOGY COURSE CONTENT, INSTRUCTION AND EVALUATION

	Mean	Excellent (1)	Good (2)	Adequate (3)	Fair (4)	Poor (5)
Course Content	2.3	22	45	22	9	2
Course Instruction	2.0	32	42	22	4	0
Evaluation*	2.8	7	26	36	8	14

*Does not add up to 100% because some students did not complete this item.

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